

9 - AUG 2000

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Volume 6 Number 2
September 1997

NEWSLETTER OF THE AUSTRALIAN NETWORK FOR PLANT CONSERVATION

Your ANPC: The Future At Stake

From the National Office

As we go to press, the ANPC is facing a major challenge, one which will shape our structure and activities over the next year, and which perhaps will also determine whether the Network has a long-term future.

On the one hand, the steady expansion of ANPC activity over the last five years (particularly the establishment of the Regional Groups) has raised the need for more formal structures within the Network to allow better co-ordination and decision-making between conferences, to provide the regions with back-up, and to guide the National Office.

On the other hand, the ANPC is currently undergoing an external Review which will determine what (if any) funding will be received in future from the Endangered Species Program (ESP) of Environment Australia. ESP funding is only one part of our financial base, but is a critical part: among other things, it covers the salary for the National Coordinator position.

The recommendation on funding by the Endangered Species Advisory Committee (ESAC) is likely to be made in October, but then must go to Federal Environment Minister Senator Robert Hill for approval. We do not expect to know our funding base before November at the earliest.

A third factor is that a component of the staffing support in the National Office, generously provided since 1991 by the Australian National Botanic Gardens, and which has been crucial to our operation, will be reduced in the near future, as the funding situation in the public sector tightens further.

Review Of ESP Funding

The ANPC has received funding from the Federal Government's Endangered Species Program since our inception. ESP funding priorities are set largely by ESAC. Quite reasonably, ESAC periodically reviews the organisations and projects that the ESP funds, and it is currently our turn.

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(Continued from page 1)

ANPC has been asked to show what it has done for plant conservation, and why it should continue to receive funds from the ESP (especially at the increased level that we have requested!).

As part of the review, ESAC has asked ANPC to propose for itself a Three-Year Strategic Plan, to guide development and to set guidelines for expenditure of any ESP funds. This includes consideration of any changes to ANPC structure that may be needed to develop and implement such a Plan. ESAC understands that ANPC is an independent organisation answerable to its membership, but seems to regard a greater degree of formality of structure as necessary. This coincides with the views of some ANPC members, and of the ANPC National Office, that we should become an incorporated body, in order to allow receipt and handling of a wider range of grants and other funds without relying (as we do now) on public service agencies to handle our accounts.

Elsewhere in this article (boxed items) are outlines of the ANPC budget scenarios, the Terms of Reference of the ESAC Funding Review, and the main points of ANPC's submission to that Review.

The National Office believes it has made a strong case for increased funding from the ESP. The Network has a unique track record, and has delivered high-value results on a pretty minimal budget. Nevertheless, in the current funding climate we cannot be certain of a favourable result.

ANPC will more than ever need to draw upon the volunteer enthusiasm of our

members. We will also need increasingly to seek funds and other forms of support from sources other than those we have relied upon in the past; this in itself will impose a major time commitment on an already overloaded National Office.

Structural Issues

In parallel with the funding problem, there is a need to review and reform our informal organisational structure. At present, the structural arrangements for decision-making are the two-yearly members' Conference, and the National Office of three people (two of

(Cont. page 3)

ANPC Advisory Committee

Dr David Aldous
Dr Tony Brown
Mr Stephen Harris
Ms Katrina Jensz
Mr Ed McAlister
Ms Margaret Moore
Prof Henry Nix
Dr Bob Parsons
Mr Tim Richmond

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whom are part time). The National Office is authorised to make operational decisions, based on Conference resolutions and input from our 11-member Advisory Committee.

Now, careful decisions need to be made about spending priorities and about how we can be most effective. Decisions involving a consensus among members across the organisation need to be on a more frequent basis than every two years.

Informal liaison has taken us a long way, but a degree of formal structure is now necessary, with a greater and more specific role for the Regional Groups (perhaps especially for the Regional Coordinators). The Advisory Committee would continue to provide independent advice to the new executive structure.

An additional reason for organisational change will come if we become an incorporated association. As we pursue outside funding and decrease our dependence on direct federal Government funding and administrative support, we will need to become more professional about accounting and liability. Incorporation will be necessary, and indeed without it we may be unable to accept some classes of funding.

The legislation covering incorporation requires certain structural arrangements, that include provision for office-bearers and auditing. Our challenge will be to combine these with our decentralised activity and diverse membership.

Nobody wants a bureaucratized structure, or members' meetings to become preoccupied with

administrative business. We must, however, respond to our growth as a network and to our changing resource base.

How Can We Respond?

The National Office is proposing the following steps:

- A special members' bulletin in mid-November, to contain:
 - Funding Review outcomes (if known);
 - assessment of pros and cons of incorporation;
 - more detailed structural options;
 - initial feedback from members.
- An Advisory Committee meeting in mid-November, with Regional Groups and members invited to make input via delegates or in writing.

(Cont. page 4)

Box 1: ANPC Funding Resources

Current Sources	Current funding	Best option 1997-8	Worst option 1997-8
ESP	\$55,000	\$172,000	\$ zero
ANBG	(staffing support equivalent to one full-timer)	(0.6 full time equivalent, with further reduction possible)	(zero by 1999)
ANBG	(communications & office support)	continuing	continuing
Members' dues, in-kind support (individual and organisational)	\$110,000	\$140,000?	\$140,000? (this assumes that expansion will continue)

- Consultations and discussion extending into 1998, with decisions made and a provisional new structure in place by June; ratification or otherwise by the 1999 Conference, after a trial period.
- After the ESP funding base is known (Nov. 1997?), ongoing membership consultation regarding practical priorities for our real business - plant conservation.

Note: The National Office is also asking members, individually and in their Regional Groups where these exist, to discuss the issues of funding, incorporation, and structural change, as soon as possible. Please send your ideas and comments to the National Office; these will be passed on to the Advisory Committee as well.



BOX 2: ESAC Review of ANPC Funding - Terms of Reference (abridged)

1. To review progress of the ANPC with respect to support from the Endangered Species Program (ESP), to revise the objectives of this support, and to establish a strategic three-year plan for consideration by the Endangered Species Advisory Committee (ESAC). Key questions to be addressed in the Review include:
 - What has the ANPC achieved so far for the conservation of plants, and how does this compare with the goals and work program that has been set?
 - What are the appropriate future directions for ESP support of the ANPC?
2. To examine ANPC objectives, goals and performance criteria with respect to:
 - Key Federal Government policies and strategies (e.g. the National Strategy for the Conservation of Species and Communities Threatened with Extinction);
 - links with other networks;
 - the ANPC's proposed future role in relation to the Endangered Species Program and existing relevant groups/networks.
3. The development of a three year strategic plan/action plan.
4. Review of ANPC structure and mode of operation:
 - current structure (advisory committee, staff, regional networks)
 - proposed changes to structure for delivery of the three-year plan.

Box 3: Main Points Of ANPC'S Submission To The ESAC Review

We have bid for 1997-8 ESP funding of \$ 172,000.

Planned national activities for 1997-2000 (under best-option funding) include:

- Consolidation of and support for existing regional groups
- Establishment of new regional groups
- Running 1999 Members' Conference
- Implementing incorporation of national body
- Pursuing external funding
- Producing second edition of National Endangered Flora Collection document
- Developing conservation data Standards
- Developing in-situ conservation guidelines
- Reviewing Translocation and Germplasm Guidelines
- Developing WWW home page
- Running Conservation Techniques Course, 1998 and 2000
- Producing Course Manual
- Maintaining *Danthonia* production
- Running meetings of Regional Coordinators
- Having more frequent meetings of Advisory Committee
- Filling vacant Advisory Committee positions.

Our main achievements to date have been:

- First documentation of (ex-situ) National Endangered Flora Collection
- First-ever Guidelines for Translocation
- First-ever Germplasm Conservation Guidelines
- Quarterly journal (*Danthonia*), 21 issues
- Nine regional sub-networks
- Professional Plant Conservation Techniques Course (2 weeks)
- ANPC activity corresponding to aims in four key Government strategies
- No other network performing the same work as ANPC
- That ANPC is membership-based, involving a full range of stakeholders.

Saving White Box Woodlands

Taken from Land and Water Resources Research and Development Corporation (LWRRDC) Media Release, January 14 1997

Researchers from the NSW Farmers' Association, the Worldwide Fund for Nature Australia, Charles Sturt University and Community Solutions (a consultancy

partnership working on rural vegetation) are collaborating to identify practical ways of stopping the decline and loss of White Box Woodlands on the western slopes of NSW.

The project is funded under the National Remnant Vegetation Program managed by LWRRDC and jointly sponsored by Environment Australia.

It is estimated that less than 0.01% of this plant community is left relatively unmodified. Many remnants, home to

threatened fauna such as the Superb Parrot, are likely to be lost in future.

The project aims to identify remnants and work with public and private landholders and managers to identify barriers (eg. continual grazing) and incentives (eg. grants or subsidies) to their conservation. Many are interested in protecting the remnants.

The project may produce a model for future collaboration on rural nature conservation issues.

Towards the Preservation and Conservation of *Corchorus cunninghamii* F.Muell. - an Endangered Species in SE Queensland.

Philip M. Cameron,
Botanical Officer,
Brisbane Botanic Gardens,
Queensland, Australia

One of the most interesting and potentially useful concepts in plant conservation in recent times would have to be the concept of integrated conservation, ie. the integrating of both in situ and ex situ conservation approaches. Traditionally, these two approaches have been viewed by conservationists as mutually exclusive, as they are normally performed by people in different institutions and organisations.

Ex situ conservation, or preservation as it more correctly should be termed, is largely performed by Botanic Gardens and Arboreta. This involves the establishment of germplasm (gene) banks, living collections of plants as well as in vitro tissue cultures and possibly DNA libraries. In situ conservation, on the other hand, generally involves conservation in nature reserves, national parks, forest reserves and other protected areas. It utilizes a hands on approach to conservation.

The Brisbane Botanic Gardens has been involved in both the ex situ and in situ preservation of *Corchorus*

cunninghamii, an endangered species in SE Queensland and Northern NSW, for a number of years. This species has been assigned a national conservation status of E (endangered; a species in danger of extinction and whose survival in the wild is unlikely if causal factors continue operating) by the Australia and New Zealand Environment and Conservation Council (ANZECC) (1993). This is due to:- (i) restricted geographical range, (ii) low population numbers, and (iii) the lack of protective measures to offset threats.

The species is a quite attractive perennial herbaceous shrub, with small yellow flowers and serrated soft green leaves. The plant grows to a height of approximately one metre, slightly higher in cultivation.

was considered to be extinct as it had not been collected from the wild for about forty years. Then it was rediscovered at a site in Pullenvale, one of the outer Brisbane suburbs, in the 1980s. Since then, this population unfortunately has completely disappeared from this site, probably due to a combination of factors including pressure from increased urbanisation, and significant modification of its habitat.

By establishing an ex situ population in the Botanic Gardens, we have been able to study the reproductive biology and note the cultural requirements of this species over a period of time. Conditions most suitable for optimal cultivation tend towards a sheltered well drained site receiving at least moderate rainfall during



Corchorus cunninghamii. Photograph supplied by Phil Cameron.

Herbarium records indicate that *Corchorus cunninghamii* existed in an area from Brisbane to Lismore near the NSW/Queensland border (although early records give imprecise details of localities). Four populations have existed in SE Queensland. However, until recently, *C. cunninghamii*

summer. The soil type does not seem to be a critical factor, but sufficient light is important. The plant is also vulnerable to weed invasion.

The species is self incompatible, and therefore requires other individuals in relatively close proximity in order to produce seed.

Individual plants in cultivation tend to flower periodically during summer and autumn for about two months at a time, although some have been noted to flower for considerably longer periods. Possible pollinating vectors such as native bees, beetles and other flying insects however, have not been directly observed by the author.

It would appear that although seed set of each individual is quite high, the natural seedling recruitment level is low. This suggests that in the wild, this species does not successfully reproduce itself in increasing numbers without some assisting factor. A germination test for seed viability was carried out on a random sample of 100 seeds using cotton wool as the germination medium. When hot water is applied to the seed the germination rate approaches 55%. Without hot water pre-germination treatment, germination rates are as low as 1.3%. This leads to the possible conclusion that heat in the form of fire would be an aid in the germination of the soil seed bank, and without appropriate management and/or weed control, this species will remain critically endangered in the wild.

Through the Botanic Gardens seed exchange program, seed of the genotype at Pullenvale which had been collected and sent to Coffs Harbour Botanic Gardens, was sent to us on request. Subsequently, this seed was germinated by the Botanic Gardens and the plants grown on by our external nursery facility in Manly. The mature plants were then given to

several individuals for translocation back into the original site at Pullenvale.

To my knowledge, studies into the genetic variability of this species have not been carried out.

Implementing a fire regime for the purpose of conserving an endangered plant population is highly impractical in a heavily urbanised environment. However, a strategy involving the collection of seed from this population and its subsequent germination and reintroduction should be feasible on a long term basis. By giving it a secure site and with commitment from concerned individuals and appropriate land care and environmental organisations, (e.g. the SE Queensland Rainforest Recovery Project, which already has two recovery programs underway), its future would then be secure. The Environment Management Branch of the Brisbane City Council is at present trying to secure the long term future of *Corchorus cunninghamii* through Voluntary Conservation Agreements (VCAs) with private landowners in the Pullenvale area, as its status on public land is still insecure (I. Hislop pers. comm.).

I would like to acknowledge the work of D. Halford, Queensland Herbarium, Department of Environment, Indooroopilly, whose Conservation Statement and Draft Recovery Plan for *Corchorus cunninghamii* (1995) was of assistance in the preparation of this article.

Useful Publication

Save the Bush Toolkit

Landholders in the central western region of NSW have access to sets of remnant bushland kits to help them assess, restore and maintain their remnant woodlands.

The kits were developed by Associate Professor David Goldney and staff from Charles Sturt University in Bathurst and Orange Agricultural College. They were one project under the National Remnant Vegetation Program managed by the Land and Water Resources Research and Development Corporation (LWRRDC) and jointly sponsored by Environment Australia.

The kits will help landholders to carry out their own research into the key environmental issues on their property, and show them step by step how to develop rehabilitation strategies.

Each kit was given two stages of testing by landholders during development to ensure that the kits will be useful for most landholders.

There are 9 different kits with 25 brochures, giving a total package for \$65 including postage and packaging.

Contact: Save the Bush Toolkit, Environmental Studies Unit, Charles Sturt University Bathurst NSW 2795.

Associate Professor David Goldney

Phone: 063 384 386;

Fax: 063 384 078.

Vegetation Mapping In The Upper Hunter Valley, NSW

*Travis Peake, Hunter Remnant
Vegetation Project*

The upper Hunter Valley, some 100 kilometres inland from Newcastle, NSW, is currently the subject of an intensive vegetation sampling project. Planned to extend over a three year period, the Hunter Remnant Vegetation Project is mapping, digitising and sampling remnant vegetation in the upper Hunter Valley to enable more informed decisions to be made about its future management.

Background

In 1994 the NSW National Parks and Wildlife Service (NPWS) undertook a literature review of all available documents pertaining to vegetation management in the Hunter. The report recognised the urgent requirement for a detailed survey to determine conservation issues and provide the basis of a vegetation management plan for the upper Hunter. Although at the time they were unsuccessful in an application for funding to carry out the project, NPWS is currently the second largest supporter of the project by providing funds and in-kind assistance.

Funding for the project was provided by the Hunter Catchment Management Trust in 1996. The Hunter Trust is a formal statutory organisation charged with the coordination of natural resource management in the

Hunter catchment since 1950. Having a history of successful management of such projects, the Hunter Trust is in an ideal position to manage the \$150,000 per annum project. Funding has also been provided by the Commonwealth Government's Save The Bush program. Currently, we are awaiting formal notification regarding a funding submission to the Natural Heritage Trust (NHT) to continue our operations into 1998. Additional in-kind assistance is provided by the Department of Land and Water Conservation (DLWC).

Vegetation Management in the Hunter Catchment

The Hunter catchment is an important economic area, producing 56 per cent of NSW coal, \$1.6 billion of overseas coal exports and 40 per cent of the State's electricity, and has important agricultural and viticultural areas (Department of Urban Affairs and Planning, 1997). Consequently, the infrastructure and land management practices of the region have had a profound impact on vegetation. Up to 99 per cent of the original tree cover in the floor of the valley has been removed or significantly altered (NPWS, 1993). Local accounts indicate that more area is covered by native vegetation at present than was the case in the 1950s, a time when large scale clearing of vegetation in the catchment was common. Observation suggests that relatively small areas are cleared in the upper catchment at present, but by the same token only relatively small areas are revegetated each year.

One of the primary concerns is that of tree dieback or decline

throughout the upper Hunter. In many remnant patches trees are dying for various reasons and not being replaced by new growth, mainly due to grazing intensity. So although clearing may occur at a very limited level, tree dieback may lead to widespread loss of tree cover throughout the upper Hunter over the next few decades if strategic revegetation efforts are not increased.

Botanically, the region's vegetation is of great interest. Being situated where no escarpment divides the coastal plain from the western slopes, as occurs along the rest of the NSW sub-coast, an interesting mixture of coastal and inland flora and fauna species is found. The valley also forms the largest obvious gap in escarpment forests anywhere along the Great Escarpment in NSW. Considerations such as these enhance the importance of obtaining a detailed picture of the conservation significance of vegetation communities and flora species in the current fragmented landscape.

The Project's Aims and Outcomes

The Hunter Remnant Vegetation Project aims to map vegetation communities, determine their conservation significance, work with and educate land managers (including farmers, coal mines, councils etc) about vegetation management, determine priority locations for large scale vegetation corridors, and provide for more informed decision making for land management issues.

The area currently under study is 3,500 sq km of the floor of the upper Hunter Valley. The boundaries stretch

from Branxton, near Singleton, in the south-east, to Denman in the west to Wingen, north of Scone in the north. If NHT funding is received, a further 3,500 sq km will be added to the study area.

Approximately one quarter of the study area has been mapped and surveyed to date. Maps have also been digitised, and will eventually be available on the DLWC Genamap geographic information system (GIS). The report for the first area is currently being finalised. No statistical analysis is possible at this stage, as the total number of sites sampled (18) is not large enough. However, as more information is gathered, statistical analysis will be possible.

A very important component of the project is to work with landholders in order to achieve better vegetation management practices. To this end we have been involving landholders in surveys of their properties and giving them detailed feedback on our findings. We have also undertaken numerous public seminars, and intend to be involved in Farming For The Future field days. In addition, we will be producing a local remnant vegetation recognition and management guide.

Open cut coal mines cover a significant proportion of the upper Hunter catchment, and their area is ever expanding. Through the Hunter Coal Environment Group network, we will work with mines to encourage vegetation corridor establishment within the framework of a sub-regional plan. Mines have already expressed interest at working within such a framework.

In future issues of *Danthonia*, I will provide updates on the

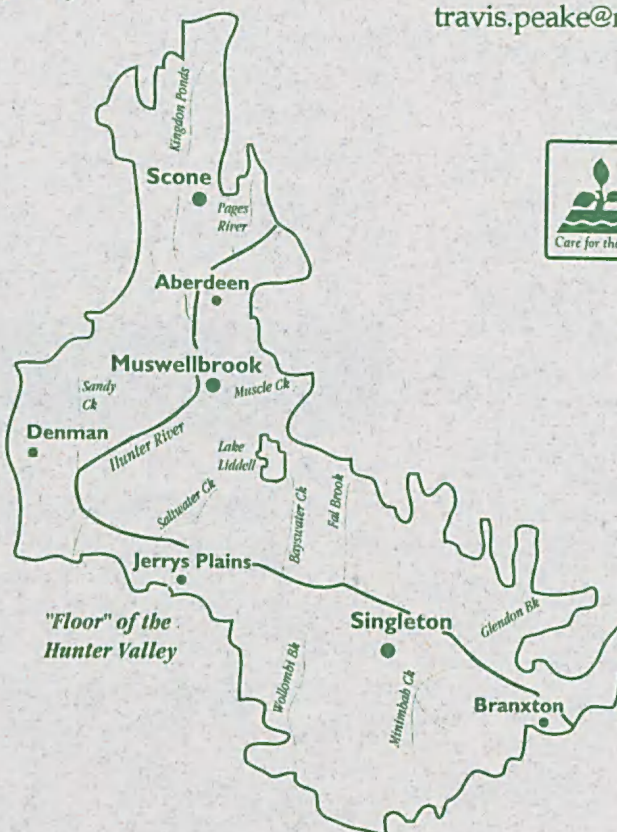
progress of the project and report on some of the outcomes. The Hunter Trust has already dedicated a substantial sum of money towards fulfilling the project's aims. Presently, we await the Commonwealth Government to do so as well!

References

Department of Urban Affairs and Planning (1997). *Upper Hunter Cumulative Impact Study and Action Statement*. Department of Urban Affairs and Planning, Sydney.

NSW National Parks and Wildlife Service (1993). *A Brief Survey of the Vegetation of the Hunter Valley Floor*. Report for Inquiry into Proposed Open-cut Mining in Part of Ravensworth State Forest, Near Singleton. NSW National Parks and Wildlife Service, Upper Hunter District.

Contact: Travis Peake,
Hunter Remnant Vegetation Project,
PO Box 393
Muswellbrook NSW 2333.
Phone: (02) 6542 5020
Fax: (02) 6241 1085
Email:
travis.peake@npws.nsw.gov.au



Grants

Grants to Voluntary Conservation Organisations 1997-8

*Information supplied by
Environment Australia*

Environment Australia, through its Environment Consultation and Support Unit in Canberra, will be making general purpose grants for eligible organisations available from late 1997.

NOTE: The advertisement is to be placed in the *Sydney Morning Herald* and the *Canberra Times* on Saturday 27 September 1997, and the **closing date for applications is 27 October 1997.**

The grants are to assist organisations with administrative costs, including salaries and salary on-costs and other office expenses, as distinct from project or campaign costs. They are competitive so not all applications can be funded.

To be eligible, an organisation must

- have the protection and enhancement of the environment as its primary objective;
- be a national, state or regional body;
- have a minimum voting financial membership of 50 (if mainly individuals) or
- have a minimum membership of five affiliated bodies with an aggregate membership of 200 or more...;

- be a non-profit organisation and have audited accounts;
- have a constitution and be incorporated....; and
- submit an activity profile for projects which could be facilitated by grant of funds for administrative support.

Guidelines and application forms can be obtained by telephoning (02) 6274 1409 or (02) 6274 1465, by email at atdbreiner@dest.gov.au, the Environment Australia Home Page at

<http://www.environment.gov.au/net/gvto.html> or by writing to:

The Director
Environment Consultation
and Support Unit
Environment Australia
GPO Box 787
Canberra ACT 2601.

1998 South-East Queensland Rainforest Recovery Conference

February or March 1998:
Tannum Sands, near Gladstone, Qld.

This conference will bring together all involved with rainforest conservation in the region. Topics will include what works, ecosystem types, threats, conservation of genetic diversity, weed problems and recovery planning. There will be workshop and plenary sessions, and field trips.

Contact: Bruce Boyes
WWF/DoE Rainforest
Recovery Officer
PO Box 155
Brisbane Albert St Qld 4002
Fax: 07 3835 9976;

Email:

Bruce.Boyes@env.qld.gov.au

Conferences

The Conservation and Biodiversity of Invertebrates

9-12 December 1997: The Australian Museum, Sydney, NSW.

Contact:

Invertebrate Biodiversity
Conference

Australian Museum
6 College St
Sydney, NSW 2000.

Fax: 02 9320 6050;

Email: invert@amsg.austmus.oz.au.

Changing Societies: the Challenge for Parks and Recreation

18-23 October 1998:
Melbourne, Victoria.

World Congress of the International Federation of Park and Recreation Administration (IFPRA), in conjunction with the National Conference of the Royal Australian Institute of Parks and Recreation (RAIPR).

Contact: The Conference Secretariat, The Meeting Planners,

108 Church St

Hawthorn Vic 3122

Phone: 03 9819 3700.

Planta Europa: Second European Conference on Wild Plant Conservation

9-13 June 1998: Uppsala, Sweden (home of Linnaeus).

The conference will be run by the Planta Europa network and the Swedish Threatened Species Unit of the Swedish University of Agricultural Sciences.

The main themes include integration of in situ and ex situ conservation; forestry and forestry policy, and agriculture and agricultural policy, with relation to plant conservation; and how Planta Europa can help with capacity-building for plant conservation.

The conference will also review the progress of the Network, develop its future program and consider and adopt the provisional constitution and operating ground rules.

There will be field trips to look at the summer landscape and flora and see plant conservation in action.

Contact: The Conference Secretariat,
Johan Samuelsson,
ArtDatabanken, SIU,
Swedish Threatened Species Unit,
Swedish University of Agricultural Sciences,
PO Box 7007,
SE-/50 07,
Uppsala, Sweden.
Phone: +46 18 67 3409;
Fax: +46 18 67 3480;
Email:
PlantaEuropa98@dha.slu.se

Fifth International Botanic Gardens Conservation Congress

14-18 September 1997:
Kirstenbosch National Botanic Garden, Cape Town, South Africa.

The congress will be hosted by the National Botanical Institute of South Africa.

Plenary sessions will include building the botanic gardens conservation network, strategies and actions for integrated conservation, meeting the challenge of the Convention on Biological Diversity, and environmental education and interpretation.

Workshops will cover conservation genetics, genebanks, re-introduction, CITES, database management, fundraising and more.

There will be pre- and post-congress training courses (eg. botanic garden management, botanic gardens education programs), and mid-congress tours (eg. to the Karoo National Botanic Garden for succulents, Cape Point Nature Reserve for mountain fynbos, West Coast National Park for spring annuals, and Kirstenbosch itself).

Pre- and post-congress tours include the Karoo, Fynbos and Renosterveld and Namaqualand.

Contact: Prof Brian J Huntley,
National Botanical Institute,
Private Bag X7
Claremont 7735
South Africa.
Phone: +27 21 762 1166;
Fax: +27 21 761 4687;
Email: bgci98@nbict.nbi.ac.za

Early Notices

The XVI International Botanical Congress

August 1999: St Louis Convention Centre, St Louis, Missouri, USA.

The Nomenclature Session of the International Association for Plant Taxonomy (IAPT) will convene also in the last week of July at the Missouri Botanical Garden, and the annual American Institute of Biological Sciences (AIBS) will be held concurrently with the International Botanical Congress.

Earth 2000

3-11 June, 2000: Sydney, Australia.

Hosted by the Wildlife Preservation Society of Australia, this will be a major international conference on conservation, to stimulate a world-wide interest in conserving wildlife.

Contact: Secretary,
Earth 2000 Conference,
Wildlife Preservation Society of Australia Inc.,
GPO Box 3428
Sydney NSW 1043
Australia.

Other Events

World Biodiversity Day:
29 December 1997

International Year of the Oceans: 1998

Cancellation

The International Diploma in Botanic Gardens Education Cancelled

*Andrew Smith, Manager,
Community Partnerships,
Parks and Wildlife Service*

Tasmania

*Jean Gray,
Education Co-ordinator,
Royal*

Tasmanian Botanical Gardens

The International Diploma in Botanic Gardens Education, which was planned for October 1997 in Hobart, has been cancelled.

There was a high level of enrolments but because delegates were coming from developing countries of the Asia Pacific, they were unable to find funds to attend. Thank you to all the people who offered their services as lecturers (there were 22 in all). It has been suggested that the course may be "before its time" in that some institutions seem happy to finance managers to attend courses but are reluctant to fund educators to do the same. The task of getting a consistent conservation message across to the community will remain difficult.

A special thanks to Qantas who funded a flight out to Tasmania for Julia Willison from BGCI, to be involved in a planning week with Gail Bromley from Royal Botanic

Gardens Kew, and Steve Merideth from Adelaide Botanic Garden. Thanks also to the British Council who had offered assistance which we will now be unable to take up.



A New Appointment for the NSW Roadside Environment Committee

Carolyn Woods is the newly appointed Executive Officer of the NSW Roadside Environment Committee (REC). She is looking forward to working with the 13 member Committee to promote the improved management of a most valuable resource - roadsides.

Carolyn brings to the new position a wealth of experience in community conservation programs, including Coastcare, the Keep Australia Beautiful Councils Tidy Towns Program and the former Save the Bush program. She worked in various locations across NSW as an environmental consultant and as a Water Quality Officer in the Murrumbidgee catchment.

"This is an opportunity to consolidate the work already accomplished by the NSW REC but also to expand its

activities into other areas of the state where roadside management plans have yet to be developed," she said. "Five per cent of the state is covered by roads, so there is a lot to do!" Carolyn believes that the management of roadsides can only be achieved through the cooperation of all groups and organisations who have an interest in maintaining, rehabilitating and conserving this valuable resource.

Formed in 1994, the NSW REC comprises organisations who have an interest in roadside management. It is funded by the Roads and Traffic Authority and the Department of Local Government. The Committee has recently developed a number of resources for roadside management including significant area roadside signs and an information package. The package includes a managing roadsides video, a handbook for road construction and maintenance workers and a three part series which looks at roadside assessment, developing a roadside management plan and implementation of the plan.

Carolyn can be contacted on (02) 9569 2685 to answer enquiries with regard to the Committee, training for construction and maintenance workers and the various publications available through the Committee.

Her address is:

Executive Officer
NSW Roadside Environment Committee
GPO Box 3482
Sydney NSW 2001.

Regional Groups

Sydney Region

Report on the meeting held
on 30 August 1997

Tracey Armstrong, Sydney
Region Co-ordinator

The most recent Sydney Region meeting was held at Mount Annan Botanic Garden on a glorious sunny day with Annan looking its best covered in yellow and golden wattle blossom. Initially it seemed a shame to sit in a dark room watching slides, but once the speakers began the wonder of the Wollemi Pine (*Wollemia nobilis*) grabbed us all and we forgot the outside world.

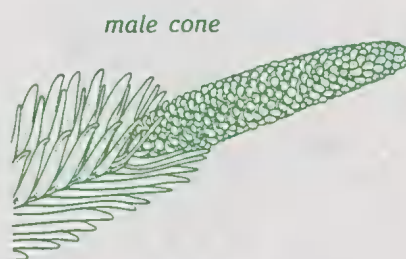
The speakers were all staff from Mount Annan who are currently involved in various facets of the Wollemi Pine project. Peter Cuneo is the Horticultural Development Officer, Graeme Errington is the Seed Store Officer and Joanne Tyler is the Acting Horticultural Research Officer.

Peter Cuneo set the scene with a potted taxonomic history of the Wollemi Pine as we understand it today: where it fits into the conifer world, fossil evidence, DNA relationships and some of the concerns both the Royal Botanic Gardens, Sydney and NSW NPWS have about its conservation. Some of the slides showed the similarities of *Wollemia nobilis* to members of the *Araucaria* and *Agathis* genera including bark, foliage, cone structure, seed structure

and even pollen. In some cases *Wollemia* was closer to *Agathis* and in others it resembled *Araucaria*. These slides illustrated the difficulties that the taxonomists had in trying to determine just what the Wollemi Pine is, as it appears to be a common ancestor to both genera.



Illustrations by
David Mackay
RBG, Sydney



After its discovery in late 1994, the first priority was to create an ex situ collection with representatives of each tree. It was also perceived to be critical to get the plant onto the market as soon as possible to relieve collecting pressure on the wild population, a population consisting of less than 40 trees.

The first step in this process is the collection of seeds and cuttings, which is where Graeme Errington took up the tale. The site is steep, narrow and difficult to get to, the seed cones are produced at the top of 40 m trees and not all the readily accessible material produced suitable growth when propagated. Getting appropriate propagating material turned out to be quite a challenge.

Plan A involved dangling from a helicopter by a rope collecting mature cones from the tree tops. Apart from the obvious dangers of being damaged by (or damaging) the branches, or the rope breaking/slipping etc it became increasingly clear that the *W. nobilis* cones shatter when ripe, even in the gentlest breeze. The downdraft from the helicopter sent the seed and scales blizzarding to oblivion.

Plan B was much less dramatic. Finely woven nylon nets were set up just above the ground, a weight was suspended from the middle of each net and the seed, and accumulated litter, fell in and was trapped. Every three weeks the material was sorted and the seed collected and brought back to Mount Annan.

The third speaker was Joanne Tyler who brought us up to speed on the horticultural research being conducted on *W. nobilis*. She brought a display of potted plants to illustrate her talk. The first seedling, sown in 1995, was about 1m tall which makes it quite a fast grower for a conifer. There were also cutting grown plants from both orthotropic cuttings (upward growing material which

produces upward growing plants) and plagiotropic cuttings (sideways growing material which produces sideways growing plants).

The Wollemi Pine grows readily from seed and cutting, the limiting factor is obtaining enough material without further endangering the wild population. Threats include the introduction to the site of pathogens eg. *Phytophthora*, the diminishment of the natural seed bank or damaging the site itself through soil compaction caused by walking around.

However neither of these propagation methods will rapidly multiply plants to fulfil the perceived public demand for the plants. Tissue culture was the next most obvious way of multiplying plants, but pines are notoriously difficult to get into culture and so it proved. The material in culture just wouldn't take.

The latest attempt to quickly produce many thousands of plants is somatic embryogenesis. This involves growing cells from young embryos. Each of these cells will then have the potential to develop into a new embryo with the ability to germinate forming a seedling.

At the end of the morning session there was a flurry of photo taking of the pine and then we repaired to the Mount Annan Cafe for lunch. The usual networking took place between interested and interesting people on who's doing what, problems, solutions, new projects and ideas etc interspersed with scoffing of sandwiches and cakes and numerous cups of tea and coffee.

After lunch Peter and Joanne gave us a guided tour

of Mount Annan's nursery including the seed store, propagation houses and, of course, the Wollemi House.

It was a very interesting and enjoyable day, and from the comments I received, a memorable day for members.



(The illustrations are taken from *On the Brink* No 6 January 1995, published by the Endangered Species Program, Australian Nature Conservation Agency (now the Biodiversity Group), GPO Box 636, Canberra ACT).

Next Meeting

Date: Saturday, 8th November 1997.

Venue: The Red Gum Forest, North Wyrabalong National Park.

This part of North Entrance Peninsula, between The Entrance and Norah Head, was the site of sand mining, proposed resort developments, and opposition by conservationists for more than twenty years until it was included in the new Wyrabalong National Park in 1991.

Our walk takes us through a series of different plant communities, from wetlands to ridgetops, including the *Angophora costata* forest that grows in ancient sand dunes up to 40 m high, between the ocean and Tuggerah Lake.

We will be accompanied by several people familiar with the area and its history, and provided with field notes and sketch map.

Program

10.00 am: We meet at the sign: "Wyrabalong National Park" on Wilfred Barrett Drive.

If you arrive via the Wyong turnoff from the freeway, it's 3 km south from the Norahville roundabout. Coming from the other direction through Gosford and The Entrance, it's 6.5 km north from The Entrance bridge.

From there, we walk on sand pathways a leisurely 10 km to finish at the starting point, stopping along the way for tea and lunch breaks, and perhaps (?) to discuss an occasional plant or two!

3:30 - 4:00 pm: Finish.

Note: This is a bush walk. No facilities at all, either at the start or along the way, so -

come prepared with walking shoes, lunch, extra drinks and refreshments in a back pack, and hat. Wise precautions include a jacket and rain coat.

If the weather looks doubtful early, you could check if it's still on, (or possible mystery alternative activity!). Phone 02 9457 8283, as early as you like (others may also be calling). After 8:00 am it will be too late!

RSVP: Gordon.

Phone: 02 9457 8283 asap to give us an idea of numbers. Please ring Gordon also for other details.

NSW Western Slopes Group

Report of the Meeting Held on 9 August 1997

Doug Beckers, NSW National Parks and Wildlife Service, Dubbo

The first impression of a participant to the inaugural field trip of the Western Slopes Group of the ANPC was:

"Oh no! With all the cars here it looks like a funeral is happening!"

Over 30 people from a diverse range of backgrounds including landholders, local and state government personnel, members of landcare and local conservation groups and individuals had a great day botanising and networking at Geurie Cemetery and Mt Arthur

Reserve. The visit was led by botanist Doug Beckers of the NSW National Parks and Wildlife Service.

Geurie Cemetery (which is between Dubbo and Wellington), is recognised as one of the last remaining 'intact' Grassy White Box Woodland remnants occurring in NSW. There was much discussion of what is meant by a remnant Grassy White Box community. The cemetery contains a large variety of native plants, which created a flurry of identification and debate on how to conserve them. But where were the White Box (*Eucalyptus albens*)? As it turns out, there was only one we could find, with the majority of trees being Fuzzy Box (*E. conica*). Nevertheless, these box communities are recognised as being threatened, and this also generated a lot of discussion.

Lunch was held at Mt Arthur Reserve near Wellington, and the afternoon walk along one of the many walking tracks was led by Keith Holmes, a local landholder and chairperson of the Mt Arthur Trust. Keith has a wealth of knowledge of the local area and gave a general history of the Reserve. The plants there were different from those at Geurie Cemetery so a large variety of native plants were seen on the day.

One of the main aims of the first field trip was to develop contact with interested people concerned with plant conservation. To this end, the field day was a great success, with most people thoroughly enjoying themselves. Visitors who travelled from afar, eg. the Blue Mountains, are keen to attend the next field trip.

Next Meeting

Date: Saturday 1st November 1997.

Venue: Burrendong Arboretum near Wellington.

The Arboretum contains a great variety of native plants and is home to a small population of the endangered Small Purple Pea, *Swainsona recta*.

Contact: Bob Waters, Burrendong Arboretum.

Phone: 02 6842 7454.

Thanks to Keith Holmes for an article in the *Wellington Times* on 15 August. Ed.



South West Slopes Region

Report on the Latest Activities

Paul Scannell, Albury Botanic Gardens

The booklet *Along the Bush Tracks* had its official launch in Albury/Wodonga on 29 August. It explains the flora, fauna and walking trails of the Albury/Wodonga region. Tim Fischer, Deputy Prime Minister, launched the booklet, describing Australia's bush as some of the most picturesque in the world. Mr Fischer also reminded one and all just how fragile it is and how the booklet will educate the public to respect the wonders that surround them. His joke about Timbuctoo finished the launch very well.

The proceeds from the booklet's sale will be put back into new publications, designed to assist the community to learn more about the vegetation and communities around them.

National Tree Day saw 330 schoolchildren come to the Albury Botanic Gardens to learn about the value of native vegetation and its relationship with wildlife of all sizes. After evaluating their answers it was apparent that the children are certainly becoming more knowledgeable in matters of conservation and enjoying learning about our endangered species.

The Revegetation Guide for the South West Slopes, by Fleur Stelling, is well underway and has grown to take in a vast area. It promises to be a great publication for our area.

Our *Caladenia concolor* project is going very well. Two new plants have been discovered, adding to the single plant which has flowered for three years in a row. These plants will be verified when they flower in the future.

The fencing project, to allow controlled grazing under the high voltage lines, is almost complete and will keep the weed problem down to a manageable level and create a firebreak. The fencing has been made available through the Murray Catchment Committee and Greening Australia.

Contact: Paul Scannell, Albury Botanic Gardens

Phone: 060 238 241.



SE NSW/ACT Region

A subcommittee of this group will meet shortly to decide on the next program.

Contact: For information, please contact the group's Coordinator, John Wilkes.

Phone: 02 6238 2490.

Email: wilkej@ibm.net

Electronic Addresses

Australian Systematic Botany Society

<http://www.anbg.gov.au/asbs>

Environmental Defender's Office Ltd

edo@magna.com.au

<http://www.internetnorth.com.au/edo>

The Office offers a free Bulletin on email, giving information about its work and listing upcoming events.

Australia and New Zealand Society for Ecological Economics

<http://cres.anu.edu.au/~dstern/anzsee/ANZSEE.html>

Note: There are new sections with links to online ecological economics publications, general environment links and the Ecological Economics Research Group at Griffith University, Qld and the new Qld branch of ANZSEE.

CSIRO Publishing

<http://www.publish.csiro.au>

Canadian Botanical Conservation Network

<http://www.rbg.ca/cbcn>

Note: this is a new web site.

Publications

The New Threatened Species Conservation Act 1995: Seminar Papers May 1996.

Ten papers giving a practical guide to the Act, its impacts, how to get information and how to participate. Presenters included Jeff Angel (Total Environment Centre), James Johnson (Environmental Defenders Office), Joanne Edney (National Parks and Wildlife Service) and Dr Jack Giles (Biological Diversity Advisory Council).

This can be obtained from the Environmental Defenders Office for \$15.00.

Contact: Environmental Defenders Office,
L9,
89 York Street,
Sydney NSW 2000.
Phone: 02 9262 6989;
Fax: 02 9262 6998.

Pollution Perspectives - Conference Papers March 1997.

12 papers focusing on different aspects of the Protection of the Environment Operations Bill 1996 (NSW). speakers included Lisa Corbyn (Environmental Protection Authority), James Johnson (Environmental Defenders Office) and Peter Woods (Local Government Association).

This can be obtained from the Environmental Defenders Office for \$15.00. See address above.

Keeping the Land Alive: Aboriginal People and Wilderness Protection in Australia. A. J. Brown. 1992.

This publication discusses the history of Aboriginal interests in land and examines the legal structures that affect this relationship.

This can be obtained from the Environmental Defenders Office for \$20.00. See address above.

Law of the Land: Environmental Law for Farmers. Environmental Defenders Office.

This is a plain English guide through the maze of environmental laws for landowners.

Available from offices of the NSW Department of Agriculture.

The Flora of Mt. Arthur Reserve: Wellington, New South Wales. 1980. G. W. Althofer and G. J. Harden. The Trustees of Mt Arthur Reserve Wellington, NSW, Australia.

This illustrated guide is available from Keith Holmes.
Address: "Noonee Nyrang",
Gulgong Rd,
Wellington NSW 2820.
Phone/Fax: 068 451 806.

A Key to Useful Australian Acacias for the Seasonally Dry Tropics. 1996. B. R. Maslin and M. W. McDonald. CSIRO.

Available from CSIRO Publishing for \$34.95.
Address: PO Box 1139,
Collingwood Vic 3066.
Phone: 03 9662 7666;
Fax: 03 9662 7555;
Email: sales@publish.csiro.au

Broome and Beyond: Plants and People of the Dampier Peninsula, Kimberley, Western Australia. 1996. K. F. Keneally, D. C. Edinger and T. Willing.

Available from CSIRO Publishing for \$39.95. See above for address.

Plants to Ecosystems: Advances in Computational Life Sciences. 1997. Marek T. Michalewicz.

Available from CSIRO Publishing for \$64.95. See above for address.

Groundwork. Number 1, Volume 1, September 1997. Published by the Australian Minerals and Energy Environment Foundation (AMEEF), Melbourne, Victoria.

This is a new quarterly publication aimed at keeping those interested up to date with the latest developments in research, technology and best practice environmental management.

Contact: AMEEF,
9th Floor
128 Exhibition St
Melbourne Vic 3000.
Phone: 03 9679 9913;
Fax: 03 9679 9900;
Email: ameeef@amira.com.au

Ecology at the Cutting Edge: Information Technologies for Managing Biodiversity and Ecological Processes. Proceedings of the Seminar held at the Centenary Theatre, St Leonards, November 29 and 30 1995. Nature Conservation Council of NSW.

Available for \$36.00 from the Nature Conservation Council of NSW.
Address: 39 George St,
Sydney NSW 2000.

Conservation Outside Nature Reserves. 1997. Centre for Conservation Biology, University of Queensland.

Available from the Centre for Conservation Biology for \$40.00 (RRP is \$50.00).

Address: University of Queensland,
Brisbane, Queensland 4072
Phone: 07 3365 2527;
Fax: 07 3365 4828;
Email: ccbinfo@ccb.uq.edu.au

Environmental Management in the Australian Minerals and Energy Industries - Principles and Practices. 1997. Ed. David Mulligan. UNSW Press, Sydney, with assistance from the Australian Minerals and Energy Environment Foundation (AMEEF).

Available for \$69.95 plus \$5.00 postage.

Address: UNSW Press,
Sydney NSW 2052.
Phone: 02 9398 8900;
Fax: 02 9398 3408.

Pastures, Trees and Shrubs for Rehabilitating Mines in Queensland. R. G. Silcock. Australian Minerals and Energy Environment Foundation Occasional Paper No. 1.

Contact: AMEEF, see previous page for address.

Seed Germination Ecology in Southwestern Western Australia. D. T. Bell, J. A. Plummer and S. K. Taylor. Australian Minerals and Energy Environment Foundation Occasional Paper No. 2.

Contact: AMEEF, see previous page for address.

Environmental Reporting - Issues and Challenges. Outcome of AMEEF Workshop, May 1996. Australian Minerals and Energy Environment Foundation Occasional Paper No. 6.

Contact: AMEEF, see previous page for address.

The Environmental Impact Statement (EIS) Study Areas Dataset. 1997. Information and Data Analysis (IDA) Branch, Dept. of Housing and Urban Development, South Australia.

This dataset contains data associated with every EIS document from South Australia, summarised and represented in land use maps, species lists, etc. It is available in hard copy, floppy disk, or at IDA's Internet site, <http://www.ida.sa.gov.au>

Contact: Information and Data Analysis Branch,
Dept. of Housing and Urban Development,
South Australia.
Phone: 08 8303 0715.

Environmental Datasets held in South Australian Government Agencies Dataset. 1997. Information and Data Analysis (IDA) Branch, Dept. of Housing and Urban Development, South Australia.

This set is based on the State of the Environment Data Inventory compiled by the Commonwealth Dept. of Environment, Sport and Territories from 1994-96. Currently available only in hard copy.

Contact: Information and Data Analysis Branch,
Dept. of Housing and Urban Development, South Australia.
Phone: 08 8303 0715.

Indigenous Plants of Maroondah On CD-ROM. 1997. Helen Moss. Baber Enterprises, Croydon Hills, Victoria.

This CD-ROM contains information on 400 plants in the region, with over 880 high resolution photographs. It allows you to view plants by common or botanical name, list plants by type and/or flower colour and list plants by species.

For system requirements, contact the publishers at the address below.

Available for \$57.50 from Baber Enterprises P/L.
Address: 57-69 Merrill Cres,
Croydon Hills Vic 3136.
Phone: 03 9879 0351;
Fax: 03 9876 1003.

Greening a Brown Land: the Australian Search for Sustainable Land Use. Reprinted 1994. Neil Barr and John Carey. Macmillan Education Australia P/L, South Melbourne, Victoria.

Draft State of the Environment report : Environment Western Australia/Government of Western Australia. 1997. Government of Western Australia, Perth.

Conserving Vitality and Diversity : Proceedings of the World Conservation Congress Workshop on Alien Invasive Species. 1997. Eds. Clayton D. A. Rubec and Gerry O. Lee. IUCN, Ottawa, Canada.

Understorey establishment research. 1996. R. G. Murphy and G. S. Dalton. Technical report no. 249. Primary Industries South Australia. Murray Bridge, SA.

The Australian Network For Plant Conservation

Membership List

The date (1995/6/7) indicates that the member has joined or renewed for that year. Addresses and names of contact persons are available from the National Office.

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 Bindi Vanzella, NSW (1996)
 John Virtue, SA (1995)
 Dierk von Behrens, ACT (1997)
 Sue & Warner Wait, Tas (1997)
 Josephine Walker, NSW (1997)
 Robert Wallis, Vic (1997)
 Bruce Wannan, Qld (1996)
 Chris Ward, NSW (1995)
 Sylvia Webber, NSW (1997)
 Matt White, Vic (1997)
 John Wilkes/Ros Cornish, NSW (1997)
 Jann Williams, NSW (1998)
 Mark Williams, NSW (1995)
 J & A Willinck, NSW (1998)
 Anne-Marie Wilson, ACT (1997)
 Brigitta Wimmer, NSW (1997)
 Carolyn Woods, NSW (1997)
 John Wrigley, NSW (1998)
 Martin Zierholtz, NSW (1997)

Donations Received from:

John Benson (1996)
 Julie Foster (1996)
 Bill Gale (1997)
 EA George (1997)
 S. Ip (1997)
 Gary Leonard (1997)
 Steven Leuver (1997)
 Gordon Limburg (1996)
 A Mackenzie (1997)
 Nan Nicholson (1997)
 Plantique (1997)
 Ruth Readford (1997)
 Martin Zierholtz (1997)